



# AMUR MINERALS CORPORATION (AIM: AMC)

# **Definitive Feasibility Study – Road to Value**

Amur Minerals Corporation ("Amur" or the "Company"), a nickel-copper sulphide mineral exploration and resource development company focused in the far east of Russia, is pleased to present an update on its Definitive Feasibility Study ("DFS") and working plan for the development of its flagship Kun-Manie nickel copper sulphide project ('Kun-Manie').

#### **Highlights:**

- Kun-Manie resource can sustain 15 years of operations at an annual mining rate of 5.0mt of ore for the production of polymetallic concentrate the base line for the DFS is set out in the Operational Blueprint, dated 29 June 2015.
- Mined ores are planned to be sourced from four open pits and two (possibly three) underground operations.
- A flotation concentrate will be generated which can be smelted by a toll smelting company or by a Company owned smelter.
- Portions of the DFS have been completed, including the geological assessment and the
  compilation of resource estimates. Future updates of the resource will be compiled for the
  discovery of new mineralisation at Maly Kurumkon / Flangovy ("MKF") and successful infill
  drilling reported in previous RNS statements.
- The compilation of mining reserves, based on metallurgical work and preliminary operating costs, will be initiated in the near term - final terms for completion of the mining evaluation are under negotiation.
- Bench scale metallurgical test work is under final review by management and will be released in the near term - the metallurgical recovery information will form a key element in the definition of reserves.
- A large scale bulk metallurgical sample is being acquired during this year's field season for the
  definition of the process flow sheet, plant design and determination of the composition of the
  concentrate for evaluation of smelter design considerations. The sample will be transported to
  Khabarovsk at the end of the 15,000 metre drill programme for shipment to one of the short listed
  metallurgical companies experienced in nickel sulphide process design, concentrate generation
  and smelting of the concentrate.

- Independent contractors and engineering groups have also been identified and short listed for design of onsite infrastructure, road access and power design for the optional owner operated furnace.
- The completion of the DFS is targeted for 31 December 2017.

#### **Robin Young, CEO of Amur Minerals Corporation, commented:**

"We are pleased to provide a detailed plan of the major steps related to our Kun-Manie DFS and the progress we have made to this point in time. There is a great deal more to be accomplished over the next 18 months and we plan to issue updates on the global progress toward its completion, as well as any key developments generated during the completion of this milestone document."

# **Enquiries:**

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#### **Notes to Editors**

The information contained in this announcement has been reviewed and approved by the CEO of Amur, Mr. Robin Young. Mr. Young is a Geological Engineer (cum laude), a Professional Geologist licensed by the Utah Division of Occupational and Professional Licensing, and is a Qualified Professional Geologist, as defined by the Toronto and Vancouver Stock Exchanges.

An employee of Amur for 12 years, previously Mr. Young was employed as an exploration and mine geologist, mining engineer, construction manager of a mine startup as well as independent consultant with Fluor Engineers, Fluor Australia and Western Services Engineering, Inc. during which time his responsibilities included the independent compilation of resources and reserves in accordance with JORC standards. In addition, he has been the lead engineer and project manager in the compilation of numerous studies and projects requiring the compilation of independent Bankable Studies utilised to finance small to large scale projects located worldwide. Mr. Young is responsible for the content of this announcement which includes information derived by Sibsvetmetniproyect, SRK, RPM, and SGS.

For further information, see the Company website at www.amurminerals.com.

#### Overview

The Company is compiling an independent Definitive Feasibility Study ("DFS") for its Kun-Manie nickel copper sulphide project located in the Far East of Russia. The operational design is based on the 29 June 2015 Blueprint design concept wherein the ores of Kun-Manie will be beneficiated to recover the economic nickel, copper, cobalt, platinum, palladium, gold and silver from four of its five identified deposits. Completion of the DFS represents a key milestone for the Company. Concurrently, additional

field work will be completed during the next 18 month period. The major focus of activities over the course of this period will include:

- The compilation and completion of the DFS for use in the development of project financing options and funding source identification.
- The completion of Russian required studies (called a Permanent Conditions TEO) allowing for subsequent approvals of detailed drawings, construction permits, and operational design parametres which are mutually supportive of the DFS designs.
- Continued exploration and engineering works drilling for the purpose of upgrading the resource in accordance with JORC reporting criteria, the expansion of reserves and support of engineering designs related to mining considerations.

The DFS will evaluate, assess and establish the detailed engineering potential of the Kun-Manie nickel copper sulphide project. It will provide for a production decision and establish the financing requirements and economic potential of the project. Principal parameters will be based on sound and complete engineering considerations. This will include cost estimate accuracy in the range of  $\pm 15\%$ . The level of detail and accuracy will be far more stringent than any previously completed studies related to the project's potential. For completeness, we note that the term "bankable" has also been used to describe a study of this level meaning the study is sufficient for project financing.

The comprehensive review and design of the project includes detailed geological and mine engineering work to define the resource and reserve to support the project and all mining associated parameters for pit slope design / underground rock mechanics, hydrology, and geotechnical design considerations. Metallurgical test work for flow sheet development, equipment selection and sizing, consumables and power consumption, material balance, general arrangement drawings, and production and development schedules will be an integral component of the DFS. Capital and operating cost estimates are to be derived from take-off drawings and vendor quotes. A draft Environmental Social Impact Assessment (EISA) will be generated and submitted to the appropriate regulatory authorities. A major component of the study will be the infrastructure development related to project access using a 320 kilometre long road. Economic analyses with sensitivities will be included to allow for the derivation of pro forma cash flow models for the mine life and the key five year start up period during which construction loans are typically repaid.

The right to mine Kun-Manie has been granted as a part of our production licence with reasonable expectations that all necessary operating permits will be granted allowing the Company to mine the metals of nickel, copper, cobalt, platinum, palladium, gold and silver. Concurrent with the DFS, a Russian standard regulatory report ("TEO") will be compiled for obtaining the necessary operating permits.

# **Key DFS Engineering Centres**

The major components incorporated in the DFS are provided in greater detail within the following sections.

#### Geology

More than a decade of exploration has resulted in the Company identifying five deposits located within the boundaries of the 36 square kilometre production licence area. Four of the nickel copper sulphide mineral deposit has been explored to the extent that the geologic character and morphology of each has been established. As part of the DFS, exploration procedures including mapping, geophysics, sampling

and drilling must be independently reviewed. Analytical procedures and a well-documented Quality Control / Quality Assurance ("QA/QC") programme must be implemented to verify the accuracy and precision of the sampling and analytical data. The QA/QC efforts have included the use of industry standards, a series of blanks, standard reference material, coarse and pulp duplicates, and samples sent to a second independent laboratory for assaying.

The geological exploration procedures and related results have been reviewed and approved by SRK Consulting (UK) Ltd ("SRK") for inclusion in the DFS. The geologic features that control economic mineralisation as well as exploration analytical results are considered to be suitable to compile reliable resource estimates in accordance with JORC (December 2012) standards.

# **Resources and Expansion Potential**

For a DFS, resource estimation is based on the development of three-dimensional models of each deposit's geology, mineralisation characteristics and continuity in order that a reliable and accurate estimate is compiled using verifiable data. The work must be done by an independent qualified company. SRK has compiled an estimate of the resources for each of the five deposits in accordance with JORC which allows for the tabulation and reporting of the mineral inventory. This component of the DFS study was completed in May 2016 and the global mineral resource inventory contains nearly 1.0 million tonnes of nickel equivalent.

May 2016 SRK JORC Resource Estimate (zero cutoff grade – fully diluted)

<b>Resource Category</b>	Tonnes (m)	Ni (%)	Ni (t)	Cu (%)	Cu (t)	Pt (g/t)	Pt (kg)	Pd (g/t)	Pd (kg)
	Mal	ly Kurı	ımkon / F	lango	vy				
Measured	-	_	_	<del>-</del>	_	_	_	_	_
Indicated	68.4	0.42	285,200	0.12	84,200	0.10	6,600	0.10	6,900
Subtotal	68.4	0.42	285,200	0.12	84,200	0.10	6,600	0.10	6,900
Inferred	22.2	0.37	81,400	0.12	25,700	0.09	1,900	0.09	2,000
Total	90.6	0.40	366,600	0.12	109,900	0.09	8,500	0.10	8,900
	I	kensko	e / Sobole	evsky					
Measured	17.5	0.50	88,600	0.14	24,200	0.18	3,200	0.20	3,500
Indicated	11.8	0.39	46,000	0.10	11,400	0.14	1,700	0.17	2,000
Subtotal	29.4	0.46	134,600	0.12	35,600	0.16	4,900	0.19	5,500
Inferred	5.9	0.78	46,100	0.19	11,400	0.17	1,100	0.21	1,200
Total	35.2	0.51	180,700	0.13	47,000	0.17	5,900	0.19	6,700
			Kubuk						
Measured	_	-	_	_	_	_	_	_	_
Indicated	3.7	0.76	28,500	0.17	7,300	0.17	700	0.18	700
Subtotal	3.7	0.76	28,500	0.19	7,200	0.17	700	0.18	700

Total         25.7         0.52         133,000         0.15         39,400         0.15         3,800         0.13         3,40           Vodorazdelny           Measured         0.8         0.57         4,700         0.17         1,400         0.25         200         0.25         20           Indicated         4.8         0.66         31,200         0.17         8,200         0.13         600         0.13         60           Subtotal         5.6         0.64         35,900         0.17         9,600         0.14         800         0.14         80           Total         5.6         0.64         35,900         0.17         9,600         0.14         80         0.14         80           Gorny           Measured         -         <										
Vodorazdelny           Measured         0.8         0.57         4,700         0.17         1,400         0.25         200         0.25         20           Indicated         4.8         0.66         31,200         0.17         8,200         0.13         600         0.13         60           Subtotal         5.6         0.64         35,900         0.17         9,600         0.14         800         0.14         80           Inferred         -	Inferred	22.0	0.47	104,500	0.15	32,100	0.14	3,100	0.12	2,700
Measured         0.8         0.57         4,700         0.17         1,400         0.25         200         0.25         20           Indicated         4.8         0.66         31,200         0.17         8,200         0.13         600         0.13         60           Subtotal         5.6         0.64         35,900         0.17         9,600         0.14         800         0.14         80           Inferred         - <td>Total</td> <td>25.7</td> <td>0.52</td> <td>133,000</td> <td>0.15</td> <td>39,400</td> <td>0.15</td> <td>3,800</td> <td>0.13</td> <td>3,400</td>	Total	25.7	0.52	133,000	0.15	39,400	0.15	3,800	0.13	3,400
Indicated			Voc	lorazdeln	y					
Subtotal         5.6         0.64         35,900         0.17         9,600         0.14         800         0.14         80           Inferred         -	Measured	0.8	0.57	4,700	0.17	1,400	0.25	200	0.25	200
Inferred	Indicated	4.8	0.66	31,200	0.17	8,200	0.13	600	0.13	600
Total         5.6         0.64         35,900         0.17         9,600         0.14         800         0.14         80           Gorny           Measured         -	Subtotal	5.6	0.64	35,900	0.17	9,600	0.14	800	0.14	800
Gorny           Measured         - <td>Inferred</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td><del>-</del></td> <td>_</td> <td>_</td> <td>_</td>	Inferred	_	_	_	_	_	<del>-</del>	_	_	_
Measured         -<	Total	5.6	0.64	35,900	0.17	9,600	0.14	800	0.14	800
Indicated         -	Gorny									
Subtotal         -<	Measured	_	-	_	_	_	_	_	_	_
Inferred         7.6         0.31         23,900         0.09         7,000         0.21         1,600         0.25         1,90           Total         7.6         0.31         23,900         0.09         7,000         0.21         1,600         0.25         1,90           Global Total Resource           Measured         18.3         0.51         93,300         0.14         25,600         0.19         3,400         0.20         3,70           Indicated         88.7         0.44         390,900         0.12         111,100         0.11         9,600         0.11         10,2           Sub-total         107.0         0.45         484,100         0.13         136,600         0.12         13,000         0.13         13,9           Inferred         57.7         0.44         255,900         0.13         76,200         0.13         7,700         0.14         7,80	Indicated	_	_	_	_	-	_	_	_	_
Total         7.6         0.31         23,900         0.09         7,000         0.21         1,600         0.25         1,90           Global Total Resource           Measured         18.3         0.51         93,300         0.14         25,600         0.19         3,400         0.20         3,70           Indicated         88.7         0.44         390,900         0.12         111,100         0.11         9,600         0.11         10,2           Sub-total         107.0         0.45         484,100         0.13         136,600         0.12         13,000         0.13         13,9           Inferred         57.7         0.44         255,900         0.13         76,200         0.13         7,700         0.14         7,80	Subtotal	_	_	_	_	_	_	_	_	_
Global Total Resource         Measured       18.3       0.51       93,300       0.14       25,600       0.19       3,400       0.20       3,70         Indicated       88.7       0.44       390,900       0.12       111,100       0.11       9,600       0.11       10,2         Sub-total       107.0       0.45       484,100       0.13       136,600       0.12       13,000       0.13       13,9         Inferred       57.7       0.44       255,900       0.13       76,200       0.13       7,700       0.14       7,80	Inferred	7.6	0.31	23,900	0.09	7,000	0.21	1,600	0.25	1,900
Measured       18.3       0.51       93,300       0.14       25,600       0.19       3,400       0.20       3,70         Indicated       88.7       0.44       390,900       0.12       111,100       0.11       9,600       0.11       10,2         Sub-total       107.0       0.45       484,100       0.13       136,600       0.12       13,000       0.13       13,9         Inferred       57.7       0.44       255,900       0.13       76,200       0.13       7,700       0.14       7,80	Total	7.6	0.31	23,900	0.09	7,000	0.21	1,600	0.25	1,900
Measured       18.3       0.51       93,300       0.14       25,600       0.19       3,400       0.20       3,70         Indicated       88.7       0.44       390,900       0.12       111,100       0.11       9,600       0.11       10,2         Sub-total       107.0       0.45       484,100       0.13       136,600       0.12       13,000       0.13       13,9         Inferred       57.7       0.44       255,900       0.13       76,200       0.13       7,700       0.14       7,80			~							
Indicated         88.7         0.44         390,900         0.12         111,100         0.11         9,600         0.11         10,2           Sub-total         107.0         0.45         484,100         0.13         136,600         0.12         13,000         0.13         13,9           Inferred         57.7         0.44         255,900         0.13         76,200         0.13         7,700         0.14         7,80			Jlobal '	Total Res	ource	· · · · · · · · · · · · · · · · · · ·				
Sub-total         107.0         0.45         484,100         0.13         136,600         0.12         13,000         0.13         13,9           Inferred         57.7         0.44         255,900         0.13         76,200         0.13         7,700         0.14         7,80	Measured	18.3	0.51	93,300	0.14	25,600	0.19	3,400	0.20	3,700
Inferred 57.7 0.44 255,900 0.13 76,200 0.13 7,700 0.14 7,80	Indicated	88.7	0.44	390,900	0.12	111,100	0.11	9,600	0.11	10,200
	Sub-total	107.0	0.45	484,100	0.13	136,600	0.12	13,000	0.13	13,900
Grand Total 164.7 0.45 740,100 0.13 212,900 0.12 20,600 0.13 21,7	Inferred	57.7	0.44	255,900	0.13	76,200	0.13	7,700	0.14	7,800
	Grand Total	164.7	0.45	740,100	0.13	212,900	0.12	20,600	0.13	21,700

Numbers may not be precise due to rounding.

Currently, drilling is being conducted on the Maly Kurumkon / Flangovy ("MKF") deposit. Inferred resources are being infill drilled and new mineralisation has been identified at the western limit of the deposit. This material has not been updated or added to the resource inventory presented above. Drilling is also planned at the eastern end of the deposit during this field season targeted at a conversion of available Inferred resources and a potential resource expansion. At the end of the field season, the Company plans to update the resource inventory of MKF.

In addition, three major exploration drill targets remain and represent highly prospective ground allowing for the further resource expansion beyond that defined by SRK in May 2016. In the west, the area between the eastern limit of MKF and the Gorny deposit contains both geophysical and soil anomalies. This area is approximately two kilometres in length. The second and larger of the three targets lies between the eastern limit of Ikenskoe / Sobolovsky ("Iken") and the Kubuk deposit. This area similarly contains geophysical and geochemical anomalies and its target length is three kilometres. The third target is the potential expansion of Kubuk eastward for up to an additional kilometre and in the down dip direction. Undrilled, these targets are not included in the DFS but could add substantially to the mine life.

# **Mining and Reserves**

DFS reserves are to be compiled in accordance with JORC (December 2012) listing rules for mining projects, reserve reporting requirements and level of engineering required for inclusion in the study. The process is an iterative and phased approach to define the final mining methods where both surface and underground production are planned to obtain the final optimal mine design. The selected production configuration is to be defined based on the geometry of the mineralisation, depth of the mineralisation and optimised profitability of the ore.

The first phase of work has been completed with the identification of the economic potential of all drill defined resources including Inferred resources. By inclusion of all classes of resource, it is possible to identify specific areas of mining potential where successful infill drilling would result in an increase in the reserve by the conversion of Inferred resources to that of Indicated or higher. These high quality drill targets can add significant economic value to the project. The target identification phase has already been completed by Runge, Pincock Minarco ("RPM") and reported 19 March 2015. Based on the RPM results, the 2015 and ongoing 2016 drill programmes at Kun-Manie targeted the areas of Inferred resource having the greatest economic potential which were and are presently located at MKF. Additional high value targets also have been identified at Ikenskoe / Sobolevsky (high grade material in excess of 0.85% nickel) and Kubuk (large scale high grade ore tonnage exceeding 20 million tonnes of ore mineralisation). These areas represent later drill targets.

The next phase of reserve definition for the DFS is the identification of the broad design of the mine. This starts with an optimisation evaluation to determine open pit economic limits and underground mine designs which will vary by deposit. The selection of economic mining limits will include assessing the impact of changes in prices, costs, and metallurgical recoveries for those resources of the Measured and Indicated resource categories. The process begins with the determination of ultimate pit designs followed by underground optimisation studies for the deposits. Based on trade off studies of the economic potential of the two mining approaches, the results will define the optimal production configuration for each deposit.

At completion of this phase and with the advancement of the mining engineering study, the mine design, production schedule and capital and operating cost estimation will be implemented to reflect the final designs. For the mine design, the detail and quantity of geotechnical data is important as it dictates the pit slopes in surface mines and the design of underground openings and suitable underground mining methods. Mine design and scheduling will include processing requirements such as maintaining mill feed grades or rock type blends, and by environmental requirements such as surface and groundwater management. A refined and detailed mine design and production schedule will be derived allowing for the definition and reporting of "reserves".

Mid-year 2015 mine reserve statements indicated that a production blend of 50% from open pit and 50% from underground production sources could deliver 0.55% nickel to the mill over a period of 15 years. Updated resource estimates have substantially increased the Measured and Indicated resource inventory and identified continuous zones of high grade ore averaging in excess of 0.75% nickel are present and have been reported in the May 2016 SRK resource inventory. The reserve study will likely result in a significant modification of the mine delivered grade to the mill and the ratio of open pit to underground production.

The Company is in the final stage of agreeing the scope of work for the definition of the mining reserve with an internationally recognised organisation that will include both open pit and underground production scenarios leading to the ultimate definition of an optimised mine plan and production schedule. It is anticipated that early life of mine production covering a period longer than that of a typical

construction loan will be derived from the MKF deposit. This deposit contains more than 50% of Measured and Indicated resource presently identified at Kun-Manie and will be evaluated first. Current drilling is focused within this deposit with the intent of increasing the resource and upgrading a portion of the Inferred resource to that of Indicated. Based on the final design and contained reserve, additional deposits will be subsequently evaluated to identify additional reserves for inclusion in the later stages of the Kun-Manie operation.

# **Process Engineering**

Process development requirements at the DFS level include test work on representative samples sufficient to develop a flow sheet, pilot testing of this flow sheet on representative blends of all significant ore types, and variability testing of all significant ore types and mining blends sufficient to identify probable plant throughput and recovery variation. Processing facilities are designed to produce marketable products for shipment directly to the consumers such as concentrates to smelters-refineries for toll smelting or for smelting by a Company owned facility. Key components for process engineering include:

- Metallurgical test work
- Mineralogical studies
- Consideration of project site conditions
- Identification of best tailing containment location and form
- Selection of processing flow sheet and design basis
- Determination of processing design criteria and description
- Plant processing facilities layout
- Equipment sizes and specifications
- Plant services

The Company has actively undertaken metallurgical work to establish the most likely process design. Sibsvetmetniproyect ("Sib") and SGS Minerals ("SGS") have reported that a smeltable concentrate can be generated which contains recoverable nickel, copper, cobalt, platinum, palladium, gold and silver. Completed at a bench scale level, mineralogical studies have also been completed. Also available are grade recovery curves and comprehensive mineralogical assessments of the concentrate. It is noted that additional metallurgical test work has been recently completed by SGS Minerals and is under management review with results to be announced in the near term. Preliminary mill site and tailings impoundment facilities locations have been identified and future site geotechnical assessment work to confirm that the selected sites are appropriate is required. Preliminary flow sheets have been developed by Sib and SGS has confirmed Sib's results and designs to be suitable for the Kun-Manie ores.

The Company is presently drilling at the MKF deposit for the purposes of resource upgrade, resource expansion and to obtain a representative bulk metallurgical sample. An integral part of the 2016 drill programme is the acquisition of the large scale representative sample located along the entire length of the deposit to determine the variability of the ores planned for mining at MKF. Monthly updates detail progress of the acquisition of the metallurgical sample.

Three companies have been identified to undertake and complete the process design work for the onsite processing facilities. Requests for proposal ("RFP") are being compiled for submission to experienced nickel sulphide engineering and design groups. Preliminary cost estimates for the process design work have been provided by the companies and will be refined upon review of all available metallurgical test work including that generated by SGS Minerals which is under current review by the Company.

#### **Concentrate Handling (Trade Off Analysis)**

The Company has four alternative concentrate handling considerations for the DFS. One of the options is to have the site produced concentrate smelted on a toll basis whilst the remaining three are owner operated options. Toll smelting requires lower capital costs but a substantial amount of the value is lost to fees at the smelter. The three owner operated options consist of the Company constructing its own furnace / refinery to generate one of three products. These consist of a Low Grade Matte, a High Grade Matte or refined metal. Internally generated analyses based on information provided by an internationally recognised concentrate treatment company indicate the best economic potential is for the Company to construct its own concentrate treatment facility located near the Ulak rail station adjacent the Baikal Amur rail line. The DFS will examine the four options to ensure the decision to construct an owner operated furnace is reasonable and which final saleable product is best suited for Kun-Manie. This component of the study requires the following considerations:

- Test work on the smelting response of the concentrate
- Mineralogical studies of the concentrate
- Evaluation of toll smelting agreements
- Consideration of smelting / refining site conditions
- Identification of best waste containment location and form
- Selection of concentrate smelting flow sheet and design basis
- Determination of design criteria and description
- Site facilities layout
- Identification of coal and limestone sources for fluxing the concentrate during smelting
- Equipment sizes and specifications
- Plant services

Bench scale work completed by both SGS and Sib has been completed and serves to provide cornerstone technical information related to the composition of the concentrate that would be derived from the four deposits of Kun-Manie. The four available options could result in a hybrid combination of toll smelting and owner operated matte or refined metal generation. A short term offtake agreement with a toll smelting company could be established to reduce initial capital funding requirements with a follow on construction phase resulting in a Company owned furnace to treat the concentrates generating a matte or refined metal. For an owner operated furnace, coal and limestone will be required during the smelting process and surveys of potential providers are underway.

The Far East and Baikal Regional Development Fund ("FEDF") fully supports the development of the owner operated furnace and are working with the Company to evaluate the potential of creating a major smelting hub alongside the Company's proposed smelter operation. For the DFS, this is not considered to be an integral part of the evaluation. However, the concept of the hub could allow for the Company to be a partner in the development of the Far East region through the treatment of concentrate sourced from other base metal sulphide mines of the Russian Far East.

#### Infrastructure

The infrastructure requirements for mining projects are site location specific. The capital cost for infrastructure can vary substantially from project to project as a percentage of the total capital cost, and is a function of the location rather than the mining or processing methods. Thus, the capital cost estimate in engineering studies must be based on a proper identification and assessment of the infrastructure requirements for the DFS. Kun-Manie related infrastructure consists of three components categorized into that related to the site, the 320 kilometre long access road from the rail station at Ulak and the power

connection at the potential owner operated smelter facility. Globally, the infrastructure covers a wide range of facilities and services to be reported in the DFS. These follow:

- 320 kilometre long access road, Ulak to Kun-Manie
- Power connection to the owner operated concentrate treatment facility
- Onsite road network
- Onsite utilities
- Onsite water supply
- Communications network
- Fuel handling and storage facilities
- Waste disposal systems
- Administration facilities located onsite, in Blagoveshchensk of Amur Oblast and Khabarovsk of Khabarovsk Krai
- Industrial facilities
- Transportation
- Townsite / Camp facilities

SRK studies completed in 2007 included consideration of all required onsite infrastructure facilities based on a 4.0 million tonne per year ore treatment capacity. Two companies have been identified to update the onsite infrastructure facilities and related operating and capital cost expenditures based on an anticipated 6.0 million ore tonne capacity per annum.

The Company has five proposals for the design of the 320 kilometre long access road from Ulak to Kun-Manie. These are now under review and a shortlist of two will be selected for a second round of bidding. The Company's approach related to the road is that it will undertake the design and construction of the road as a full Company obligation within the DFS. Alternative financing of the road is under discussion with the FEDF and could substantially impact the DFS if negotiations are successfully completed.

Power is comprised of two elements. Onsite power generation will be implemented using diesel powered generator sets. Power to the smelting / refining area is being investigated and evaluated with final requirements being established once the final concentrate tonnages and the composition of the concentrate are more fully defined.

# **Marketing and Commodity Pricing Considerations**

Marketing studies are critical to define the nature of the market for the potential products to be generated by the Company. This includes the preferred production rate, the potential for substitution, potential competitors (new mines coming on stream), product specifications, future product prices, likely buyers and terms of sales. Depending upon the final commodity parameters, product samples may be supplied to potential buyers for evaluation as a part of the negotiation process. This may entail additional pilot plant test work in order to produce sufficient samples.

#### **Environmental and Social Management**

The Company has identified two qualified environmental and regulatory specialists to develop effective and economic environmental controls for the mining operation and processing of ore onsite, along the 320 kilometre long access road and at the anticipated furnace / smelter facility located along the Baikal Amur rail line. Proposals are under review to ensure that all applicable environmental regulations (international, federal, state, and local) are fully considered. Social considerations for the DFS are also included.

# **Economic Analysis**

Economic analysis will be performed using conventional pro forma cash flow analysis and tradeoff studies for the project. Sensitivity analyses will be included to determine project exposure and risk to the variability of pricing, mined grades, metallurgical recoveries, operating and capital cost variation, and overall economic viability.

# **DFS Project Management**

The development of the DFS requires professionals with extensive mine industry experience in multiple disciplines. The higher the quality of the DFS team, the higher are the chances to reduce risk during the development of a project. To date, the Company has selected internationally recognised and Russian experienced teams allowing AMC to optimize the project as much as possible and to apply the best-proven technology available. This has included consideration of project financing experience required for inclusion in the preparation of a DFS. The Company's selection of an organisation is critical to ensure the correct project teams are involved in the determination of an optimal outcome and timely completion of the study. This allows the Company to focus on reducing both project development and cost risks.

The Company notes that a DFS must be compiled and approved by an independent and qualified organisation. In addition, the Company is required to compile and submit additional Russian Federation required reports necessary for obtaining final approvals to construct and operate the mine at Kun-Manie, the access road and owner operated furnace. For this reason, the Company has identified two companies to undertake the project management and compilation of the DFS whilst simultaneously compiling mutually supportive Russian required documentation and materials. Both organisations are internationally recognised and have extensive experience within the Russian Federation, a key qualification. The Company is preparing requests for proposals to undertake this key management role.

#### Glossary

# DEFINITIONS OF EXPLORATION RESULTS, RESOURCES & RESERVES EXTRACTED FROM THE JORC CODE: (December 2012) (www.jorc.org)

A 'Mineral Resource' is a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

A 'Measured Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and/or grade continuity.

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.